

t154_relat_1 (TMEjBmHKUBM- MzUMhvbLR5PBx83GdGAVXeiz)

October 27, 2020

Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $k5_relat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k3_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (v1_relat_1 X2) \Rightarrow (k5_relat_1 \\ & (k5_relat_1 X2 X0) X1 = k5_relat_1 X2 (k3_xboole_0 X0 X1)) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (v1_relat_1 X1) \Rightarrow (k9_xtuple_0 (k5_relat_1 \\ & X1 X0) = k3_xboole_0 (k9_xtuple_0 X1) X0) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0. (v1_relat_1 X0) \Rightarrow (k5_relat_1 X0 (k9_xtuple_0 X0) = X0) \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. k3_xboole_0 X0 X1 = k3_xboole_0 X1 X0 \quad (4)$$

Theorem 1

$$\begin{aligned} & \forall X0. (v1_relat_1 X0) \Rightarrow (\forall X1. (v1_relat_1 X1) \Rightarrow (k5_relat_1 \\ & X0 (k9_xtuple_0 X1) = k5_relat_1 X0 (k9_xtuple_0 (k5_relat_1 X1 \\ & (k9_xtuple_0 X0)))))) \end{aligned}$$